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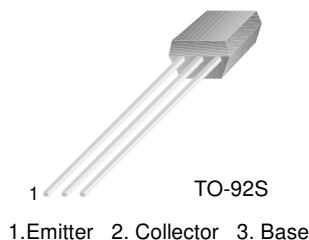


# KSC2785

KSC2785

## Audio Frequency Amplifier & High Frequency OSC.

- Complement to KSA1175
- Collector-Base Voltage :  $V_{CBO}=60V$



## NPN Epitaxial Silicon Transistor

### Absolute Maximum Ratings $T_a=25^\circ C$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	50	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	150	mA
$P_C$	Collector Power Dissipation	250	mW
$T_J$	Junction Temperature	150	$^\circ C$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ C$

### Electrical Characteristics $T_a=25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C=100\mu A, I_E=0$	60			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10mA, I_B=0$	50			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\mu A, I_C=0$	5			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB}=40V, I_E=0$			0.1	$\mu A$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB}=3V, I_C=0$			0.1	$\mu A$
$h_{FE}$	DC Current Gain	$V_{CE}=6V, I_C=1.0mA$	70		700	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=100mA, I_B=10mA$		0.15	0.3	V
$f_T$	Current Gain Bandwidth Product	$V_{CE}=6V, I_C=10mA$		300		MHz
$C_{ob}$	Output Capacitance	$V_{CB}=6V, I_E=0, f=1MHz$		2.5		pF
NF	Noise Figure	$V_{CE}=6, I_C=0.5mA, f=1KHz, R_S=500\Omega$		4.0		dB

### $h_{FE}$ Classification

Classification	O	Y	G	L
$h_{FE}$	70 ~ 140	120 ~ 240	200 ~ 400	350 ~ 700

# Typical Characteristics

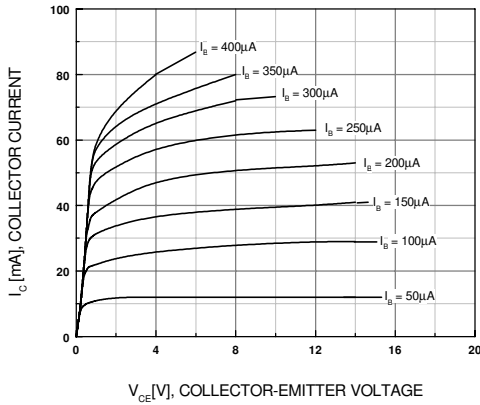


Figure 1. Static Characteristics

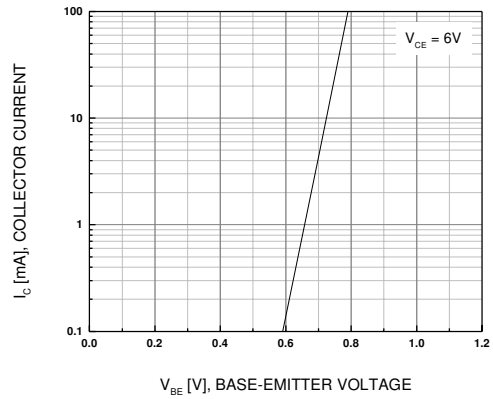


Figure 2. Base-Emitter On Voltage

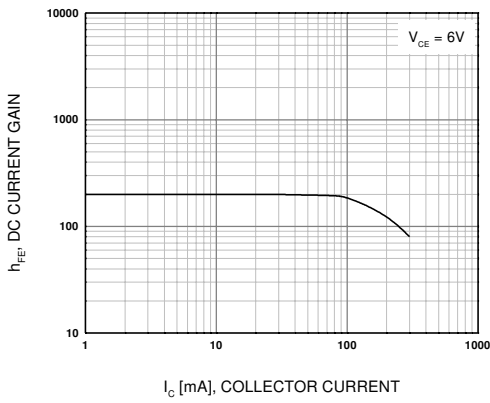


Figure 3. DC Current Gain

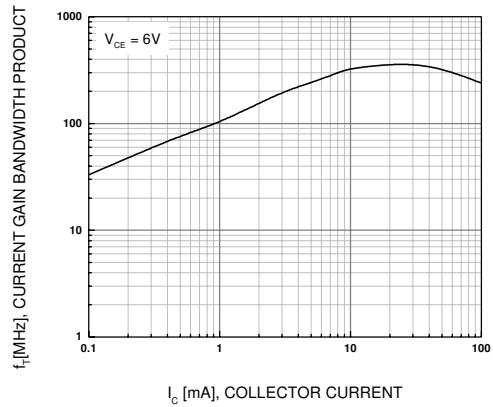


Figure 4.  $f_T - I_C$

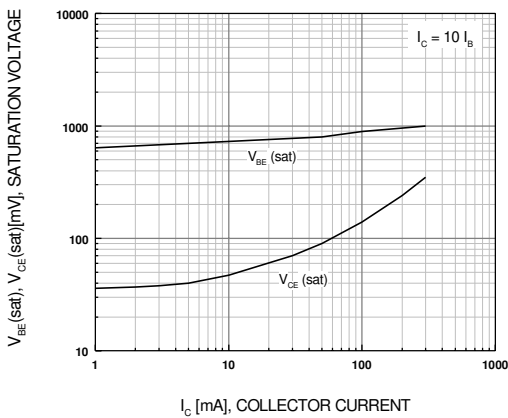


Figure 5. Saturation Voltage

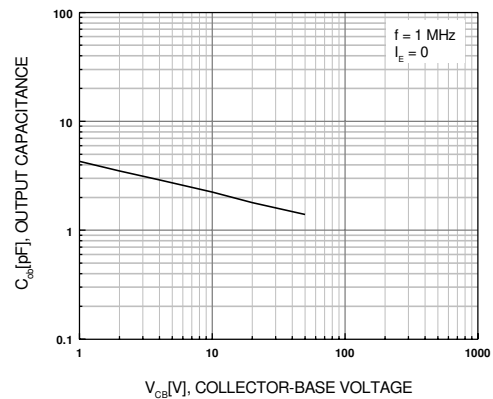
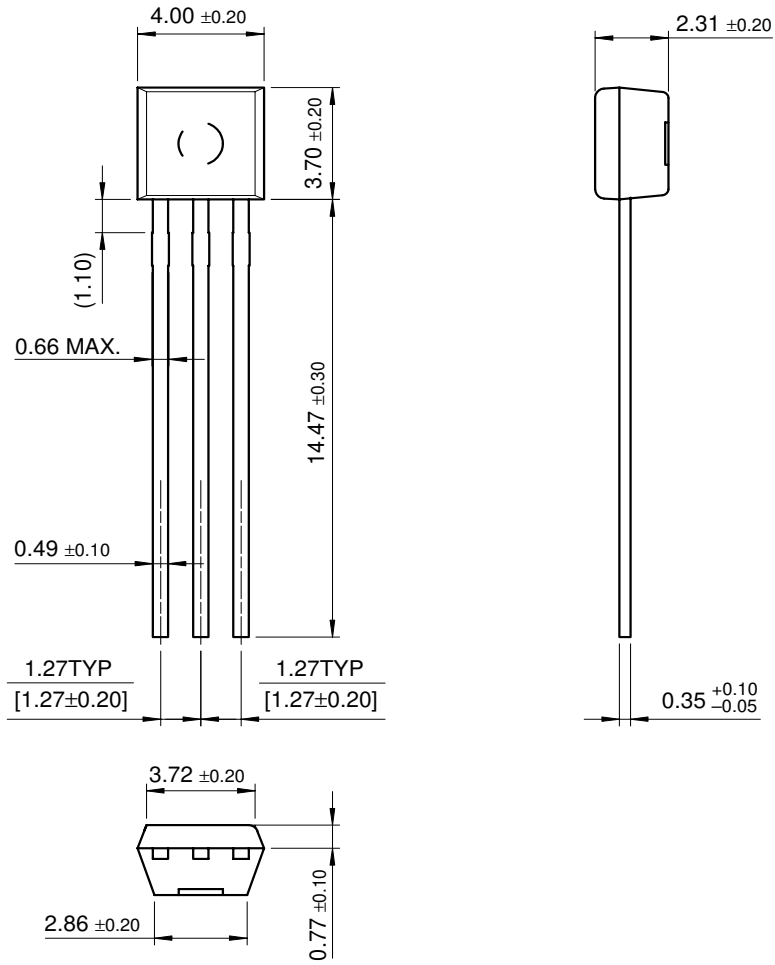


Figure 6. Output Capacitance

# Package Dimensions

## TO-92S



Dimensions in Millimeters

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ActiveArray <sup>TM</sup>	FACT Quiet series <sup>TM</sup>	ISOPLANAR <sup>TM</sup>	POP <sup>TM</sup>	Stealth <sup>TM</sup>
Bottomless <sup>TM</sup>	FAST <sup>®</sup>	LittleFET <sup>TM</sup>	Power247 <sup>TM</sup>	SuperSOT <sup>TM</sup> -3
CoolFET <sup>TM</sup>	FAST <sup>r</sup> <sup>TM</sup>	MicroFET <sup>TM</sup>	PowerTrench <sup>®</sup>	SuperSOT <sup>TM</sup> -6
CROSSVOL <sup>TM</sup>	FRFET <sup>TM</sup>	MicroPak <sup>TM</sup>	QFET <sup>TM</sup>	SuperSOT <sup>TM</sup> -8
DOME <sup>TM</sup>	GlobalOptoisolator <sup>TM</sup>	MICROWIRE <sup>TM</sup>	QS <sup>TM</sup>	SyncFET <sup>TM</sup>
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EnSigna <sup>TM</sup>	I <sup>2</sup> C <sup>TM</sup>	OCX <sup>TM</sup>	RapidConfigure <sup>TM</sup>	UHC <sup>TM</sup>
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